REMARKS

This Amendment is submitted in response to the Office Action dated April 1, 2008. Claims 1, 4, 5 and 7 to 21 are pending in the application. Claims 1 and 21 have been amended. No new subject matter has been added by the amendments of the claims. Claim 10 has been cancelled without prejudice or disclaimer. The Commissioner is hereby authorized to charge deposit account 02-1818 for any fees which are due and owing.

In the Office Action, Claims 1, 4, 5 and 7 to 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Chinese Patent No. 135652 to Guo ("*Guo*")in view of U.S. Patent Application No. 2003/0175827 to Stillman ("*Stillman*") or U.S. Patent Application No. 2003/0134294 to Sandford ("*Sandford*"). Claims 1, 4, 5 and 7 to 21 were further rejected under 35 U.S.C. §103(a) as being unpatentable over *Stillman* or U.K. Patent Application No. 2,016,687 to Decker ("*Decker*") in combination with either *Guo* or *Sandford* and U.S. Application No. 2004/0198637 to Schultz, et al. ("*Schultz*"). Applicants respectfully submit that these rejections have been overcome and should be withdrawn for at least the following reasons.

Claim 1 has been amended to provide a method for the production of a protein micro-array formed of discrete analyte-specific regions present on a solid support, each discrete region containing a selected capture protein, wherein the activity of the capture protein is maintained under dry conditions. Claim 21 has been amended to provide a method for stabilizing the tertiary structure of a capture protein of a protein micro-array stored under dry conditions. Support for these amendments may be found in the Specification at, for example, paragraphs [0009], [0010] and [0012] in combination with paragraph [0032]. The methods of Claim 1 and Claim 21, have also been amended to each include contacting a protein with C_5 to C_7 polyol that is between 1 and 5% of a spotting solution.

Guo does not teach or suggest a method for the production of a protein micro-array with a selected capture protein, wherein the activity of the capture protein is maintained under dry conditions with a C_5 to C_7 polyol that is between 1 and 5% of a spotting solution. *Guo* also does not teach or suggest a method for stabilizing the tertiary structure of a capture protein of a protein micro-array stored under dry conditions with a C_5 to C_7 polyol that is between 1 and 5% of a spotting solution. *Guo* teaches that alkyl polyalcohol and antiseptic agent can stabilize

bioactivity of target probes in liquid state but requires mycose to stabilize the bioactivity of target probes "in the dry-up process or even in dry state". *Guo*, page 13, second paragraph. As is well known in the art, mycose is a sugar and not a C_5 to C_7 polyol. Therefore, one of skill in the art would not have been motivated to stabilize a capture probe under dry conditions with a C_5 to C_7 polyol. Furthermore, *Guo* does not teach or suggest contacting a C_5 to C_7 polyol that is between 1 and 5% of a spotting solution. Instead, *Guo* discloses a stabilized sampler solution that contains 10-50% (v/v) alkyl polyalcohol. *Guo*, page 13, first paragraph.

Stillman does not teach or suggest a method for the production of a protein micro-array with a selected capture protein, wherein the activity of the capture protein is maintained under dry conditions with a C_5 to C_7 polyol that is between 1 and 5% of a spotting solution. Stillman also does not teach or suggest a method for stabilizing the tertiary structure of a capture protein of a protein micro-array stored under dry conditions with a C_5 to C_7 polyol that is between 1 and 5% of a spotting solution. As discussed in previous remarks accompanying the Amendment filed January 8, 2008, the methods of denaturing proteins disclosed in *Stillman* teach away from the intended purpose of the present application of maintaining the activity of the capture protein. As provided above, Claim 1 is now directed to a method for the production of a protein micro-array with discrete analyte-specific regions containing selected capture protein, wherein the activity of the capture protein is maintained, and Claim 21 is now directed to a method for stabilizing the tertiary structure of a capture protein. Therefore, Applicants respectfully submit that the claims are commensurate with the fact that *Stillman* teaches away from the intended purpose of the present application.

The remaining references fail to cure these deficiencies of *Guo* and *Stillman*. For example, at least *Schultz* and *Sandford* involve proteins in a liquid or gel state. *Schultz*, in particular, describes the use of maltitol to maintain hydration of polypeptides and to "prevent the evaporation of nanodrops". *Schultz*, paragraph [0101]. This is in complete contrast to the claimed invention directed to a protein micro-array having with the activity of a capture protein maintained under dry conditions (Claim 1) and stabilizing the tertiary structure of a capture protein of a protein micro-array under dry conditions (Claim 21). For this reasons and for reasons made of record, this teaching away also discourages one of skill in the art from combining these references, and Applicants respectfully submit such combination is improper.

In addition, the references do not disclose a C_5 to C_7 polyol that is between 1 and 5% of a spotting solution. For example, *Decker* discloses sugar solutions having at least 10% xylitol, mannitol and sorbitol. *Decker*, Table 1. Therefore, Applicants respectfully submit that none of the cited references, either alone or in combination, disclose each and every element of the claimed invention, and, in some cases, teach away from the claimed invention. Accordingly, Applicants respectfully submit that the rejections have been overcome and should be withdrawn.

For the foregoing reasons, Applicants respectfully submit that the present application is now in condition for allowance and earnestly solicit reconsideration of same.

Respectfully submitted,

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